437 landlords, who would otherwise, apparently, have
423 been excluded from the cash economy. Such
[511] money could be spent by the Nambudiri and Nayar aristocracy on clothing and imported luxury goods available in Muslim bazaars in the towns. Some Muslims also held kanam lands in villages whence they could obtain rice and vegetables. Others bought food for cash from Nayar tenants.
[556] Apart from the kanam tenure the use of cash was, however, extremely restricted in inland villages, and surplus cash was converted into gold orna-
[583] ments or other objects of ostentation. Among the lower castes small coins had a symbolic value, and a fixed number were handed over in marriage payments, but their use in economic exchange among the lower castes appears to have been negligible.

434 In spite therefore of the considerable overseas
554 trade, the complex division of labour, and the marked differences in wealth (expressed chiefly in size of houses, differences of clothing and jewelry, and types of food) between the several castes, the overall economy of Kerala in the traditional period was relatively stationary, and such social mobility as there was, was confined to the Muslims, Christians and "good" Hindu castes above Nayar retainers. It appears to
[613] have been this fact which permitted the persis-
[631] tence of such a relatively rigid feudal system and the existence, within each homogeneous local caste group, of a lineage system as the main organizing principle.

000 (3) Traditional Political Administration

3:Gough E-4, 5 (1947-1949)1961 AWll Kerala AWll
North Kerala Nayar

591 shared a home with the wife's mother and sometimes with others of
592 her matrilineal elders. Twenty-four lived neolocally in a house con-
178 taining no natal kinsfolk of either partner; of these 24 couples, 7 lived in a private house acquired by the husband; 11 lived in a house jointly acquired by husband and wife; and 6 lived in a house acquired by the wife.

591 As these figures suggest, duolocality is still the accepted norm of
178 residence for younger married couples in Central Kerala, and avun-culocality slightly less so for those in North Kerala. In both areas
[434] participation in a market economy has caused a shift toward neolocality, especially for middle-aged couples. In the North Kerala village, however, the modern prevalence of cash-crop farming has carried this tendency further than has small-scale urban wage work
[562] in the village in Cochin. At the same time, because of the coöperation of North Kerala men in cultivation, the male sex normally determines the pattern of residence. Couples live avunculocally, neolocally, or
591 even patrilocally because men must live on their land. In the Cochin
562 village, by contrast, the male shift from military to small-scale salaried
464 employment has only partially undermined the position of women as the sex which remains on the ancestral land and for which the land
178 is cultivated by lower-caste servants. It is still women whose claims, in the majority of cases, determine the choice of residence in Central Kerala. Women, whenever possible, remain on their own land and men adapt themselves to this condition by living duolocally, matrilocally, or in some cases neolocally in a house partly provided by the wife.

Kinship Relationships

613 MATRILINEAL KIN

576 The etiquette of behavior between matrilineal kin was traditionally the same in North as in Central Kerala, but the emphases in terms of rights and obligations were somewhat different.

The kāranavan's ultimate legal authority was much the same as in the Central kingdoms. However, he lacked domestic authority over women and their small children, who resided elsewhere. Among
[591] adults, avunculocal residence caused great emphasis to be placed on the unity of the matrilineally related men, who should coöperate in work and property management for the good of the taravād as a whole. Covertly, their relationships tended to be rivalrous and hostile. Open disputes between them were often avoided through the separate allocation of plots to individual men. The distance thus created be-

8:Panikkar I-4, 5 (no date) 1918 AWll Kerala AWll
Nayar

241 market. All that is necessary is grown in the compound. The great difficulty of village life, effective sanitation, becomes an easy matter.

241 Rice cultivation is still based on serf-labour. The Pulayas were the slaves
56 of Nāyars till nearly fifty years ago, when slavery was abolished. But the abolition of slavery has only changed the legal status of the Pulaya. He still remains a landless labourer effectively bound by his former chains, by the great social barrier of caste and the greater difficulty of poverty and ignorance. The Pulaya is an agricultural labourer and nothing else. As long as he remains attached to one family he receives certain sums of money in times of distress, pieces of cloth and food on auspicious occasions, extra payment at childbirth, etc. He loses all this for an insecure wage and a nominal freedom if he leaves his old master. The Pulayas, therefore, have mostly remained serfs in spite of the abolition of slavery.

241 In fertile districts the ordinary methods of cultivation are followed. In the less fertile parts the system of leaving the farms fallow in alternate years, or occasionally once in three years, is followed.

241 The harvest time is between April and May. Naturally the gayest part of the
796 Nāyar year is in May and June. The great festivals of all the temples from one end of Malabar to another fall in this part of the year. The festival in a temple extends to ten days, but the last two days are the most important. Very seldom these festivals overlap, and therefore for two full months the Nāyars enjoy an almost uninterrupted carnival. In these places poets from the length and breadth of Malabar come to meet their confrères, artists to exhibit their work, musicians to display their art, astrologers to practise their tricks, in short anybody who has wares to exhibit or sell. No one below a Nāyar in the hierarchy of caste can go to these places. They are, of course, admitted and entertained free. In some places even the food is supplied by the temple. The greatest of all these festive occasions is the *Puram* at Trichur, in Cochin State, which falls at the end of April or the beginning of May. Then there is the *Astamay* at Vaikom a little earlier in the year.

463 The Nāyars, as we noticed at the beginning, are mainly an agricultural people;
[441] but a good many of them also go into trade. There are in these days Nāyars very high in Indian commercial circles.

The educated people generally choose the learned professions. In medicine, in law, in journalism, and in public life, they have been very successful. Especially in journalism it is interesting to note that a fair percentage of the editorial staff of the papers in India, whether European or Indian, is drawn from them. The only Indian member of the Viceroy's Cabinet is a Nāyar gentleman, Sir C. Sankaran Nāyar.

434 *Distribution of Wealth, Poverty, etc.*—The distribution of wealth among the Nāyars does not show the same great inequality as among other communities of India. There are moderately rich families having an average income of £10,000 a year, but extreme poverty is unknown. This is mostly due to two reasons:

8:Panikkar I-4, 5 (no date) 1918 AWII Kerala AWII
Nayar

This is mostly due to two reasons: 434 [832] [245]
First of all, there is the joint family system which provides for all the members without distinction. Secondly, every Nāyar family lives on its own plot of ground on which coco-nut palms are grown, which bring in a small but quite comfortable sum.

The standard of life is comparatively high. Among the richer classes it is fairly decent, even according to the higher material standards of Europe, while, among the poorer clases, it never comes anywhere near the uncleanliness, the misery, the unrefined and uncultured barbarism which is the atmosphere of the slum life of the big cities of Europe. Poverty is less disreputable than in civilised communities, and the difference this makes is immense. The peculiarly civilised idea that success is the criterion of intrinsic merit, and that, consequently, failure by itself proves that it was deserved, is almost totally unheard of among the Nāyars. The fact that the individual members of a family have to pool their abilities and, to some extent, their personal incomes, prevents the sharp distinction between the rich and the poor which is so characteristic of societies organised on an individual basis. 511 [613] [182]

Food.—The Nāyars are not vegetarians. Like all Hindus, they do not eat beef, but nothing else is prohibited. Fish is a favourite article of food, and there is an old couplet which sings: 262

"*Kaṇṇ vizhakkū Kari yuṭaru vaku*
Bhaṭa Bhojana maṭu Kooṭilla." [539]

"Then there is a kind of banana of the seas (fish)
And the Nayars cannot live without it."

There is another couplet, which says:

"There is nothing among the various kinds of food which equals the flesh of a boar."

The Nāyars are great epicures and they cook beautifully. Rice, of course, is the staple food, but milk curds, butter and *ghee* are things of equal importance.

Most Nāyar families have three meals a day. The breakfast, among the poor people, consists of rice boiled with water in the form of a pudding. With it is taken as relishes pickles, fried fish, cooked vegetables, etc. The next meal is at noon. The main course, of course, is rice. The first part of it is eaten with butter, boiled peas, and many other relishes. The second course is fish, vegetables, etc., mixed with rice. The third part is eaten with buttermilk, mangoes, and pickles. The supper at night is also a meal of which rice is the chief part. The thing about it is that, though the main course is the same as porridge among the Scotch, the variety, as well as the taste, of the subsidiary dishes is what makes all the difference. 264 262

Clothing.—The typical Nāyar (male) clothing is the *Mundu*. This is generally 2½ yards long, 1½ yards broad, cloth of fine texture made at Eraniyal in South Travancore. Nowadays, people wear cotton cloth from Lancashire, while the richer classes go in for Benares silk. 291 184 [439]

8:Panikkar I-4, 5 (no date) 1918 AWll Kerala AWll Nayar

gent, persevering, and prosperous community. Fourthly, there are the foreign Brahmins, who are chiefly usurers, making money by lending at a fabulous high rate of interest and buying up property. Now, the *Tharavad* (or the joint undivided family) system gives the Nāyars a great advantage. Their capital is strategically massed, so to say, and while the property of a family is joined together its credit is much more than it would be if it were divided between the various members. Intelligent Nāyars see the advantage of this position, and are loth to break up what is most certainly an effective economic organisation.

The tendencies of change that are visible are mainly the following:

There is, first of all, a distinct process of change from the *matrilocal* to the *patrilocal* system. This is at present confined to a few of the English-educated families. The officials and those in learned professions have their wives and children staying with them, and this has most certainly set up a new current of opinion. The tendency among these people has been to change the matrilocal matriliny into patrilocal. The older families still look with disapproval on this, and it has not progressed very much, except among a few ultra-moderns. Even in orthodox families the women were allowed for a few months every year to go and stay with their husband's people. Now, by the Nāyar Regulation Act (1912) of Travancore, the husband is given the right to demand that his wife should come and stay with him. Of course, it is open to the *Karanavan* to prohibit this, but in such a case the husband can divorce his wife immediately. Therefore we may safely predict a definite change to a patrilocal system among the English-educated classes of Nāyars.

But whether this would contribute towards a change from matrilineal to patrilineal system is a question more difficult to answer. On the whole I am inclined to answer it in the negative. But for the economic competition of other communities, the Nāyars would certainly have partitioned their estates and started on a patrilineal existence. But now it is too late. The economic interest involved is so vast, the number of people to be affected by it so great, the change in itself so revolutionary, that it is, for a long time at least, beyond the scope of either legislative or administrative action. It would, indeed, be very interesting to watch the line of evolution which such a community, placed as it is between the close and powerful oligarchy of the Nampudiri Brahmins, and the no less powerful and at present unquestionably more aggressive Syrian Christians, would take. The next quarter of a century will probably solve the problem. What the solution will be it is impossible for us to say; that it will not for a long long time, at least, be real patriliny, I can prophesy; the rest time alone can answer.

APPENDIX.

Note No. 1.—The Origin of the word "Nāyars."

There are many reasons to believe that the term Nāyar is a corrupted form of the word *Nagar* or "serpent-men." The generally accepted derivation of the word

9:Iyer E-4, 5 (ca. 1902-1906)1912
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and one with less than that number was called a *Désavázhi*. There were in those days no taxes levied from the people, and the chief from the Rajas down to the *Désavázhi* possessed demesne lands for their support which were cultivated either by themselves or leased to *kudiyáns* or tenants; but the following were the chief sources of income, based upon feudal rights and privileges. The rulers levied custom duties upon exports and imports, taxes upon houses of fishermen, tradesmen and professional men. Criminal fines went to fill their coffers, and succession duties were levied upon the estates of deceased persons, especially those who held offices of State or rights over land. Outcast women were made a two-fold source of profit. Lewd adulterous women were made over to the chiefs with a premium for the trouble of looking after them, and the chiefs used in turn to sell the women to foreign merchants as slaves or wives to *Chettis*. The estates of persons who died without heirs were escheated, nor could an heir be adopted without the Raja's consent, for which a fee was generally levied. Protection fees from strangers and merchants were levied under various names and customary presents were the ruler's dues on occasions of feast or funeral. Wrecks were his perquisites, and various animals his monopoly. Concerning the former, Marco Polo wrote about the kingdom of Eli, "And you must know that if any ship enters the estuary and anchors when she has been bound for some other port, they seize her and plunder the cargo. They say that you are bound somewhere else, and it is God that sent you hither to us, so we have a right to all your goods, and think it no sin to act thus. This naughty custom prevails all over the Provinces of India, to wit, that if a ship be driven by a stress of weather into some other port than that to which it is bound, it is sure to be plundered. But if a ship came bound originally to the place, they received it with all honour and gave it protection."[1] The custom of the taking of ships and cargoes lasted down to recent times, until the English factory at Tellicherry entered into agreements with three of the country-powers for the exemption of English vessels from such seizures.

Among the animals that became the property of the Raja were cows with three or five dugs, cattle that has killed a man or other animals, cattle with a white spot near the corner of

1. Yules Marco Polo, page 374.

10:Nakane E-5 (1955-1956) 1962 AWll Kerala AWll
Nayar

19th century. In this connection, I was much interested in studying court records and various documents, including *the Nayar Regulation II, 1925, Travancore*, and *the Malabar Marumakkathayam Act of 1933*, which legally marked the end of the functional Nayar *tarwad* system. Actual partition of an individual *tarwad* occured earlier, or later, than these acts.[1] However the present discussion is concerned mainly with the internal situation of the *tarwad* as it disintegrated, the discussion of external factors and causes of the disintegration of the *tarwad* are omitted.

The process of the disintegration of the *tarwad* can be summarized in terms of the essential elements which constitute the functional body of a *tarwad*:

A. members of a matrilinial lineage exclusively
B. co-residential (domestic) unit
C. property owning unit
D. headed by the *karanavan*
E. Ceremonial unit.

In the disintegration of the *tarwad*, the group loses these elements gradually. The element which is lost first seems to be *B*. A population which exceeds the limit of the accomodation of a *tarwad* building, results in residential separation of small segments of a matrilineal group who have the same grandmother, or grand-grandmother, called *tawari*. Such a group, residing in a separate household, in the course of time tends to develop as a temporal economic unit. Though the ancestral property is held in common by all members of the *tarwad* together, the residential sub-group would become a semi-independent productive and consumption unit: the income would not be pooled into the *tarwad* but consumed by the members of each group. Hence the function of the *karanavan* as the head of the *tarwad*, the property group, becomes incomplete.

At the same time, when the residential unit becomes smaller, it would give chances for the inclusion of spouses and the element A would be shaken. The cohabitation of wife and husband leads to the inclusion of nonmatrilineal members in a matrilineal residential group. These factors bring on economic and psychological confusion in the duties and obligations of a *tarwad* member. Thus, by the destruction of elements *A*, *B*, and *C*, the status of the *karanavan* becomes ambiguous. There occur various disputes between the *karanavan* and other members on the rights of the *tarwad* property.

This situation is enhanced by the fact that an increase of members who have an independent income without depending on the *tarwad* property, form an independent household with his wife and children. This situation makes it difficult to maintain the *tarwad* as a property unit, and also infringes the function of the *karanavan*. In fact the actual contribution of the father who was not the legal guardian of his children is significant in the failure of the role of the *karanavan* for the matrilineal members. Thus at last a *tarwad* has no alternative

1 A report of my study on these legal documents, including materials given in this paper, was published in Japanese: "On the disintegration of the Nayar *tarwad*," *Memoirs of the Institute for Oriental Culture*, University of Tokyo, Vol. 14, pp. 1–131, 1958.

for the most acute problem of Kerala, viz., abnormally high rate of unemployment. According to a survey carried out by the State Statistics Department open unemployment in the State was as high as 4.2 per cent (all-India 0.6%) and under-employment 9.6 per cent of the total population (all-India 6.0%).

The unemployment problem of Kerala might not have been so severe had there been a correspondingly rapid development of industries over the past few decades. In this sphere the State suffers from certain handicaps. Although the industrial sector in Kerala absorbs a high proportion of the working force (Kerala 19.1%; India 9.4%), the majority of them are engaged in very low productivity industries. The two major industries of Kerala, viz., coir and cashewnut are technologically very backward. Coir industry, which is organized as a cottage industry, absorbs 4-5 lakh persons. Cashewnut-processing, although organized on the lines of factory industry, is almost entirely unmechanized. As a result, labour productivity in the secondary sector is extremely low. Because of this, industrial sector in Kerala does not create any sizeable reinvestible surplus and the process of capital formation is hampered. The types of industries in which Kerala predominates, have not also aided the development of entrepreneurial talents. Kerala lacks in a long tradition of industrial enterprise. Most of the large scale industries which now exist in Kerala, for example, Fertilizers & Chemicals Travancore Ltd., Travancore-Cochin Chemicals Ltd., Indian Aluminium Company and Aluminium Industries Ltd., were started under the direct initiative of the governments of the erstwhile States of Travancore and Cochin or industrialists from other neighbouring States of India. No distinct body of local entrepreneurship has, therefore, developed in the State.

In addition, lack of sizable mineral deposits (except Ilmenite) adds to the difficulties which have been retarding industrial development of the State. Coal as well as all metallic raw materials for the industries of Kerala have to be transported over long distances from other parts of the country. But there are favourable factors compensating some of these deficiencies in the economic endowments of the State. The agricultural sector of Kerala abounds in a rich variety of high value yielding cash crops like coconut, pepper, rubber, arecanut, tea, cashewnut, cardamom and coffee. These crops not only provide considerable incomes for the farmers, but are a good source of foreign exchange earnings and provide valuable raw materials for the industries. A vast potential for generation of low-cost hydro-electric power makes up for the absence of fossil fuels. Rich forest and fishery resources, a highly intelligent and literate labour force, easy accessibility to most parts of the State through a wide network of roadways, and the scenic beauty of its landscape capable of attracting tourists, are some of the other assets of Kerala.

As a result of the present survey, several lines of technically and economically feasible developments have been suggested in this report in the industrial and other fields. The total impact of these developments would be to raise the per capita income of the State from the present level of Rs. 240 (at 1955-56 prices) to Rs. 404 (at the same price level) by 1970-71. State income would rise from Rs. 400 crores (at 1955-56 prices) to Rs. 812.8 crores, i.e., at an average annual rate of 10.3 per cent. The targets are undoubtedly on the high side, but the needs of Kerala in the context of its huge unemployment and very low per capita income demand a rather high

rate of growth if economic and social stability is to be attained within a reasonable period.

Growth of this magnitude can be achieved in a balanced manner over the decade through an increase of about 60 per cent in the income from primary sector, 175 per cent from the industrial sector, and 103 per cent from the tertiary sector. Sectoral growth rates of this magnitude would bring about structural changes in the economy. Over the decade the proportion of income contributed by agriculture and other primary activities would decline from 48.2 per cent to 42.8 per cent while that from secondary sector would increase from 15.7 per cent to 21.2 per cent. Income from the tertiary sector would remain more or less constant around 36 per cent. Similarly the inter-sectoral distribution of working force would undergo changes. By 1971 the proportion of employment in the primary sector would decline from 54.9 per cent in 1956 to 42.2 per cent while in the secondary and tertiary sectors it would increase from 19.3 per cent to 24.6 per cent and 25.8 per cent to 33.2 per cent, respectively.

In planning the strategy of growth for Kerala two important factors need to be stressed: (*a*) a proper system of crop priorities in the sphere of agricultural development and (*b*) technological improvements in the industrial sector.

In the sphere of agriculture, the trend of thinking up till now has been to emphasize the need for achieving self-sufficiency in foodgrains within the State. This has led to a sizable increase in the area under foodgrains at the expense of high value adding cash crops, despite the fact that Kerala offers highly favourable conditions for cash crop cultivation. The right policy for the State Government to adopt would be (*a*) to meet its foodgrains deficit by import from surplus States and (*b*) to reserve to the maximum extent all new lands coming under cultivation, for cash crops.

For raising the yield of foodgrains, a programme of widespread use of improved seeds, intensive use of fertilizers, control of soil erosion and provision of major and minor irrigation have been suggested. It is estimated that over the decade the various measures contained in the report would raise the output of foodgrains by 7.28 lakh tons. By 1970-71, the output of foodgrains would be about 16.5 lakh tons leaving a big gap to be filled by imports from other surplus States.

This report does not agree with the view sometimes propounded that the need for providing irrigation facilities is less in this State because rainfall is high. Irrigation is essential for double or triple cropping, stabilization of crops and for effective application of fertilizers. Moreover, in view of the terrain of Kerala, it is also necessary to develop irrigation facilities through minor irrigation schemes. Irrigation projects suggested in the report therefore require an investment of Rs. 39 crores in major works and Rs. 20 crores in minor works.

The need for a faster pace of industrialization than achieved hitherto is particularly urgent in Kerala in view of the high man-land ratio already attained in this State. There is a limit beyond which employment in the agricultural sector cannot be increased. A solution to the key problem of Kerala, viz., high degree of unemployment, can therefore be attempted only by further industrialization of the State. Industrial development will also be the main spearhead of overall growth of the State economy.

11: India G-4,5 (1960-1961) 1962 AWll Kerala AWll

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COMPARATIVE POSITION OF BIRTH AND DEATH RATES

		Average birth rate per year per 1,000 persons	*Average death rate per year per 1,000 persons*
1941-51	All-India	41.3	24.9
	Kerala	38.2	19.9
1951-56	All-India	41	25
	Kerala	38	17

Source: NCEAR calculations based on Census data and corrected birth and death registration data.

1.18 In fact comparative data for the different States shows that the death rate in Kerala is the lowest in the whole of India. The death rate is lowest in Kerala, presumably because of the generally high standard of hygiene of the people of this area. The erstwhile States of Travancore and Cochin had long followed a progressive policy in the field of providing public amenities such as medical facilities, sanitation, etc. Since the standards of literacy as well as the average level of intelligence are fairly high in Kerala, with a more vigorous family planning programme it should be possible to bring down the birth rate within a shorter span of time than in many other parts of India.

[249]

Rural-Urban Breakdown

162 1.19 Only 13.5 per cent of Kerala's population lived in urban areas against 17.38 per cent of all-India, according to the Census of 1951. This difference seems to have narrowed down during the last decade, the proportion of urban population in Kerala having risen to 15.03 per cent by 1961, while it rose to only 17.84 per cent for the whole of India.[1]

36 1.20 The villages in Kerala are unique in size. According to the Census of 1951 as high as 13 per cent of villages had a population exceeding 5,000 persons against only 0.38 per cent of such villages in the whole of India. However, there are some redeeming features which prevent the countryside from presenting an appearance of over-congestion. The villages in Kerala are of a different type than is usual in the rest of India. The homesteads are generally not clustered together but are dotted almost all over the countryside. This spread out of population keeps living conditions healthy and clean in the rural areas.

STATE INCOME, OCCUPATIONAL DISTRIBUTION AND LABOUR PRODUCTIVITY

● 437 1.21 The State income of Kerala in 1955-56 has been estimated at Rs. 351.6 crores[2] at the current prices (Table 3). This is roughly 3.4 per cent of the National Income of India (Rs. 9,980 crores) for the same year. For an area which is only

[1] It may be noted that this is only a broad conclusion as the definitions of urban areas in Census of 1951 and of 1961 are not identical.

[2] *See* Appendix 2 for details.

II: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

1.2 per cent of the total area of India, this contribution is quite significant. Yet the per capita income of Kerala in 1955-56 (Rs. 234.4) was lower than the all-India average (Rs. 261) by about Rs. 27, that is, 10.3 per cent.

1.22 The distribution of output and employment between primary, secondary and tertiary activities gives a broad indication of the stage of development an economy has attained. As a general rule, the more advanced the stage of economic development, the higher the proportion of income and employment originating in the secondary and tertiary activities. In Kerala the sectoral distribution of output and employment presents somewhat of a contrasting picture (Tables 3 and 4).[2] In terms of employment, the proportion of working force engaged in agriculture and allied occupations (55%) is much smaller than the corresponding all-India proportion (71.8%). This would seem to indicate that Kerala has perhaps reached a level of development somewhat comparable to that of a country like Japan. But the picture presented is quite different when one looks at the proportion of income contributed by the various sectors. The major share (49.1%) of output still originates in the primary sector (all-India: 45.4%). The secondary and tertiary sectors taken together contribute 50.9 per cent of the output against 54.6 per cent in the case of all-India.

1.23 Thus, while the sectoral distribution of population seems indicative of a diversified structure of the economy, the sectoral distribution of income does not. Two factors seem to provide a plausible explanation for this contrast. In view of the high density of population, the possibilities of providing gainful employment in the agricultural sector are naturally limited. Super-imposed upon this is the fact that as a result of the predominence of perennial crops, especially the coconuts, in the agricultural sector, the cropping pattern in Kerala is comparatively less labour-intensive. As a result of the operation of these forces, a large section of the population appears to have been forced to turn to some sort of non-agricultural activity or the other. But this seems to be of a "make-work" character. The technology of the secondary sector is traditional and its productivity is appallingly low.

1.24 In fact, productivity in Kerala's secondary sector is even lower than in the primary sector. This reversed position of Kerala only points to one of the strange paradoxes that occur in an under-developed economy. Ultimately, it is not so much the sectoral distribution of working force as the sectoral levels of productivity that are the determinants of growth. Productivity, in turn, is a function of the level of technology. Table 4 shows that the net output per worker in the secondary and tertiary sectors is lower than the average for all-India. As may be observed, low productivity is especially marked in the secondary sector which mostly covers the industries (Kerala—Rs. 539; all-India—Rs. 1,294).

Agriculture and Plantations

1.25 On the other hand, the primary sector in Kerala is comparatively better developed. This is a distinct feature of the State economy. Primary sector comprises agriculture, plantations, animal husbandry, forestry and fisheries. As may be seen from Table 4, labour productivity in the primary sector of Kerala is roughly

[2] [see pp. 270-271, category 116 -- Analyst]

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against the all-India average of 7.5 acres; and over 60 per cent of the landholdings in Travancore-Cochin area are less than one acre in size.

1.31 The high pressure of population also reveals itself in an urge to push along the margin of cultivable area as far as possible. This is shown by the fact that the proportion of net sown area (45.25 lakh acres) to total area of the State was as high as 47.16 per cent against 39 per cent for the whole of India in 1956. The higher proportion assumes even a greater significance in view of the fact that forests cover over 25 per cent of the total area of Kerala (all-India—18%).

1.32 The agricultural labourers form a very high proportion of the agricultural population (Kerala 39%: India 17.5%), and the extent of under-employment among them is also one of the highest in India. The number of days of employment per agricultural labourer in Kerala was only 170 days per year[1], the lowest in the whole of India.

1.33 A deterioration in the position of the agricultural labourers is shown by the decline in the average annual income of agricultural labour households between 1951 and 1957. As can be seen from the table below, the average annual income of an agricultural labourer's household in Kerala declined from Rs. 486 in 1951 to Rs. 437 in 1956. This is a much steeper decline than observed in the case of the whole of India, presumably due to a higher rate of growth of population in Kerala than in India.

AVERAGE ANNUAL INCOME OF AGRICULTURAL LABOUR HOUSEHOLDS

	Kerala (Rs.)	*India* (Rs.)
1950-51	486	447
1956-57	437	437

SOURCE: *Second Report of the Agricultural Labour Enquiry Committee.*

Consumption Pattern

1.34 The level of consumption expenditure per head is a good indicator of the standard of living prevailing in any region. Table 5[2] gives a comparative picture of the pattern of consumption expenditure for the rural areas of Travancore-Cochin[3] and India. As may be seen, the average monthly consumption expenditure in Kerala (Rs. 18.64) is lower than that in all-India (Rs. 21.44), indicating a somewhat lower standard of living in the State.

1.35 The break-up of total expenditure into different items of consumption reveals some interesting points. The expenditure on foodgrains, milk and milk products is not only absolutely lower in Kerala but even as a proportion of total expenditure, it is considerably below the all-India average. On the other hand, meat, egg, fish and 'other food' absorb quite a high proportion of consumption expenditure in Kerala. These differences reflect the relative scarcity of foodgrains

[1] *Report of the Agricultural Labour Enquiry Committee.*

[2] The data is compared for Travancore-Cochin and India (1952) because figures for Kerala State are not available. However, the conclusions are likely to be broadly true of Kerala also.

[3] [See p 272, Category 11b -- Analysis]

11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

Cashewnut industry, by the very nature of the process involved, does not require much of capital equipment. Although the average size of cashewnut factories is about 400 workers per unit, capital requirements in the industry hardly exceed Rs. 200 per worker. Even the coir and cotton textile factories in Kerala use only the handlooms. Existence of handlooms within the precincts of textile factories is, in fact, a unique phenomenon in Kerala (especially the Malabar region). Only a dozen out of over 300 textile factories use modern equipment. Nowhere else in India can this be seen.

1.46 The contrast between a well-developed primary sector and a backward industrial sector is also brought out by comparative wage statistics for the two sectors. It has already been pointed out that in spite of a high degree of unemployment in the agricultural sector, the wage rates and average household earnings, though low, do not compare very unfavourably with the average for all-India. On the other hand, the average annual earnings of workers in factories covered by the Payment of Wages Act are only Rs. 736 per worker. As may be seen from the table below, this figure is one of the lowest in the whole of India.

AVERAGE ANNUAL EARNINGS OF FACTORY EMPLOYEES, 1956

	Rs.
Andhra	595
Assam	1,526
Bihar	1,236
Bombay	1,415
Madhya Pradesh	982
Madras	950
Orissa	947
Punjab	991
Uttar Pradesh	1,014
West Bengal	1,142
Kerala	736

Source: *Statistical Abstract of India* (1957-58).

Overhead Facilities

1.47 In respect of overhead facilities, Kerala is fortunately better placed than many other parts of India. This has been the result of a progressive policy followed by the Governments of the erstwhile States of Travancore and Cochin, whose rulers took an active interest in the development of various public amenities and tried to attract industrialists from other parts of India to invest in Kerala.

1.48 In the sphere of transport, the coverage of Railways is rather limited, total route mileaghe being only 543 miles. This is, however, more than compensated by the wide network of roadways, which in spite of its many drawbacks, is superior to that in most other parts of India. The extent of road mileage per 100 square miles as well as the vehicle density in Kerala are the highest in the country. Road transport is, in general, more suited to conditions prevailing in Kerala than Railways because of the uneven nature of the terrain.

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survey carried out in Kerala on the eve of the Second Plan period. According to this survey, 6.3 lakh persons, that is, 4.2 per cent of the total population were openly unemployed while another 15.2 lakhs (5.2% of the population) were under-employed. This is, indeed, a very high degree of unemployment when compared with the corresponding all-India proportion of 0.58 per cent for the openly unemployed and 6 per cent for the under-employed.

1.58 There is some evidence to show that the level of unemployment has been rising steeply over the past few decades. Between the Census of 1931 and that of 1951 the participation rate slumped down from 48 per cent to 36.1 per cent. Although the difference in concepts used in the two Census operations exaggerates the extent of decline, it does convey some idea of the fast deterioration in the unemployment situation over the years.

1.59 Unemployment on this scale is the outcome of a high rate of population growth, unaccompanied by economic growth at a correspondingly fast rate. In spite of a large section of the population being engaged in non-agricultural activities, the rate of expansion of employment opportunities in this sector has been very low, and the pressure on agricultural sector has been constantly increasing. In the 20 years, between 1931 and 1951, according to the Census data, the proportion of population dependent upon agriculture increased from 34.2 per cent to 53.8 per cent.

1.60 The approach to the problem of unemployment has got to be two-sided. Measures to curb the rate of growth of population form one aspect of the solution. The second and the more important weapon is to accelerate the pace of industrial development so as to diversify the pattern of growth and, thus, reduce an excessive dependence on the agricultural sector. It is with this aim in view that the following chapters attempt to assess the resources available and to explore the development possibilities in each sector of the economy during the coming decade.

SOME RECENT TRENDS

1.61 Planned economic development, as in the rest of the country, was initiated in the State during the early years of the last decade. The First Plan of the State covered only the Travancore-Cochin region since Malabar was merged to from Kerala only after the end of the First Plan. The outlay for the First Plan was Rs. 30.03 crores. On a per capita basis the public sector outlay during the First Plan came to Rs. 32.2 per head (all-India Rs. 55). During the Second Plan, the reorganized State was allotted Rs. 87 crores. The total outlay came to about Rs. 97 crores if Central investment in the State be also included. On per capita basis, again, public sector outlay in Kerala was considerably behind the all-India figure (Kerala: Rs. 64 per head ; all-India: Rs. 118).

1.62 Year to year estimates of growth of the State Income are not available for the last decade. This lacuna makes it difficult to assess the overall impact of the Plans on the whole economy. However, a very rough estimate has been made for growth of the State Income between 1956 and 1961 and the estimates are given in the following table.

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STATE INCOME (RS. IN CRORES)—AT 1955-56 PRICES

	1955-56	1960-61	Proportionate increase (per cent)
Primary Sector	172.5	193.2	12.0
Secondary Sector	52.3	62.6	19.7
Tertiary Sector	126.8	144.2	13.7
TOTAL	351.6	400.0	13.7
Per capita income	Rs. 234.4	Rs. 240.0	

433 1.63 As a result of the various measures for increased agricultural production, the value added by this sector has increased but not by any spectacular amount. Output of rice increased from 7.5 lakh tons in 1952-53 to 8.7 lakh tons in 1955-56 and 9.8 lakh tons in 1959-60, the increase between 1956-60 being 8 per cent. Other important increases during the period 1955-56 to 1958-59 were: tapioca 15 per cent; sugarcane 3 per cent, arecanut 5 per cent, rubber 6 per cent, cashewnuts 22 per cent, coconut 3.2 per cent and bananas 120 per cent. On the basis of these increments in output and shift towards a superior cropping pattern, it is estimated that the net value contributed by the agricultural sector increased by about 10-12 per cent between 1955-56 and 1960-61. A rate of growth of 12 per cent is assumed for the whole of the primary sector over the Second Plan period.

1.64 Estimates of increase in the output of industry can be made only with the help of indirect indicators. There is generally a high correlation between increase in the consumption of electrical energy and output from the organized factory sector. [377] On the basis of data for the utilization of electric energy in industries, factory output has been estimated to have increased from Rs. 18 crores in 1955-56 to Rs. 24.4 crores[1] in 1960-61.

1.65 Non-factory sector output is estimated to have increased from Rs. 32.3 crores to Rs. 35.5 crores.[2] The rate of increase of output from the secondary sector as a whole, therefore, comes to be 19.7 per cent. The rate of industrial growth may have been higher but for the fact that during the Second Plan period industries could not develop at the anticipated pace as a result of non-execution of all the power projects planned earlier. Foreign exchange difficulties were the main obstruction in the way of implementation of Plans for power projects. Consequently effective

[1] During 1955-56, the relationship between factory sector output and electricity consumption works out to Rs. 0.8/kWh. According to NCAER's study *Demand for Energy in India* this coefficient is likely to decrease with the passage of time both as a result of the spread of power-using equipment and through the expansion of electric-intensive industries. By 1960-61, the co-efficient in case of Kerala is expected to have decreased to Rs. 0.65/kWh. The industrial consumption of electricity by 1960-61 is expected to have reached 376 m. kWh. On the basis of the co-efficient of Rs. 0.65/kWh, the output from factory sector is estimated to have reached Rs. 24.4 crores, by 1960-61.

[2] Non-factory sector output is assumed to have increased in the same ratio as gross purchasing power. Gross purchasing power depends upon rise in population as well as the rise in per capita income, that is, it is correlated with increase in over-all level of income. Since output from the non-factory sector mostly caters to the needs of the local village population, it is not very unreasonable to assume that output from this sector has increased at the same rate as income originating from agriculture, which roughly represents the level of purchasing power in the rural areas.

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capacity increased from 89.6 MW to only 100 MW during the Second Plan period. Total availability of electrical energy increased from 347.1 million kWh (1955-56) to 515 million kWh (1958-59) mainly through an increase in the load factor.

1.66 Tertiary incomes generally grow at about the same pace as the commodity output, that is, output of the primary and secondary sector combined. Tertiary income is assumed to have risen at 13.7 per cent, the same as the State Income. On these premises projections for sectoral increase in the State Income (at 1955-56 prices) of Kerala have been given in table under paragraph 1.62. State income is expected to have increased by 13.7 per cent but most of this rise has been absorbed by the increase of population. Consequently the per capita income at constant prices is likely to have arisen from Rs. 234.4 (1955-56 prices) to only Rs. 240.7 in 1960-61.

1.67 This has been rather a slow rate of development. Obviously Kerala needs a higher rate of growth, much bigger plans that would generate it, and a strategy of development that would ensure it These aspects are considered and discussed in the chapters that follow. The picture which emerges out of the aggregation of sectoral plans is discussed in Chapter 12 dealing with the pattern of growth.

Chapter 2

Agriculture and Plantation Crops

DISTINCTIVE FEATURES OF AGRICULTURAL SECTOR

A NUMBER OF distinctive features are characteristic of the agricultural sector of Kerala. In the first place, Kerala surpasses all other regions of India in respect of the high pressure of population on land. Secondly, on account of the large number of valuable cash crops, the agricultural sector is more commercialized in the State than elsewhere. Thirdly, food production has always been far short of Kerala's requirements.

2.2 With the fast rising density of population, the margin of cultivation has been constantly receding. The proportion of net sown area to total geographical area is consequently much higher in Kerala (47.16%) than in the rest of India (all-India: 39.1%). The average size of land-holdings, however, is much smaller (1.5 acres) in Kerala (all-India: 7.5 acres). In the Travancore-Cochin area, 66 per cent of the holdings are below one acre in size. (Table 7)[2]

2.3 The scarcity of land in relation to population has been responsible for an acute state of unemployment and under-employment among the people in the rural areas. Unemployment is about three to four times higher in Kerala than in the rest of India. The acute state of unemployment is also accounted for by Kerala's cropping pattern which is comparatively less labour absorbing than in many other parts of India. The perennial crops which take up 47 per cent of the cultivated area need labour recurrently only for maintenance and harvesting[1] although crops like tea and rubber require human labour on a large scale for picking of the green leaves and tapping of rubber. The perennial crops require very little labour for basic operations such as preparation of seed bed, sowing, etc., except once in their life time.

2.4 However, the fact that the cropping pattern of Kerala is not labour-intensive is compensated to some extent by the higher value yield of the perennial crops per cultivated acre. The soil structure and climatic conditions in Kerala favour a high value yielding cropping pattern. On an average, cash crops contribute Rs. 100 crores (65%) to the income from agriculture (Rs. 151 crores). Of the cash crops, coconuts occupy 20.2 per cent of gross cropped area, standing next only to paddy which occupies 35.8 per cent of the gross cropped area. But the value yielded per acre for coconuts (Rs. 446) is more than twice that for paddy (Rs. 212). The position regarding the other crops is given in Table 9.[3]

2.5 In respect of plantation crops the only other State which approaches closest to Kerala is Assam where the proportion of cultivable area devoted to plantation

[1] This aspect is discussed in greater detail in the Chapter on Manpower No. 11.

[2] [see p. 273, cat. 116 -- Analyst]

[3] [see p. 275, cat. 116 -- Analyst]

Chapter 3

Animal Husbandry

23 ANIMAL HUSBANDRY IN Kerala is poorly developed. It stands in sharp contrast to the well-developed agricultural sector. With the exception of poultry, low livestock productivity marks all aspects of animal husbandry. The milk yield in the State is among the lowest in the country. The total production of milk in Kerala in 1956 has been estimated at 1.82 lakh tons,[1] which works out to a per capita production of 1.3 ozs. as against the minimum of 10 ozs. per capita recommended by the Nutritional Advisory Committee of the Indian Council of Medical Research. This is also true of yield of meat from sheep and goat. Consequently, the contribution of animal husbandry to the State income is comparatively low. During 1957-58 the net contribution of livestock to State income was Rs. 12.2 crores, that is, only 3.3 per cent of the State income while for all-India it was about 8 per cent.

Livestock Population

3.2 According to the 1956 Census of livestock, Kerala had a total livestock population of 4,168,000. This consisted of 2,510,000 cattle; 4,88,000 buffaloes; 97,820 sheep; 113,711 pigs; 956,000 goats, fowls and ducks. The number of cows and she-buffaloes in milk per thousand of human population was very low at 30, while the same was as high as 148 in Madhya Pradesh, 123 in Punjab, 150 in Rajasthan (all-India 80). Other major heads of livestock in the same year were sheep (97,820) and pigs (113,711).

3.3 In 1956 there were 838,000 working cattle in the State (Table 20). The significant fact about this is the high proportion of buffaloes to the total working cattle. The buffaloes constituted about one-third of the draught animals. The corresponding all-India proportion in the same year was only 9 per cent. Buffaloes are popular in Kerala as draught animals, because of their superior draught capacity and greater suitability for the puddled type of cultivation. This has an important bearing on the formulation of the future breeding policy.

3.4 Between the Census of 1951 and 1956 the livestock population rose by over 17 per cent in the State as against only 4.8 per cent for the entire country. There has been an all round increase under all the major heads except pigs (—3.6%) and sheep (—77%). A large increase in the livestock and poultry population may be partly due to a higher level of reporting in the Census of 1956 over the previous Census.

[1] *Indian Livestock Statistics*, 1953-54 to 1955-56, Ministry of Food and Agriculture, Government of India.

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part of poultry population still consists of the indigenous types despite the introduction of high yielding exotic breeds such as Rhode Island Reds and White Leghorns in the early thirties. The local breeds give 50 to 60 eggs a year, while the average by the White Leghorn and Rhode Island Reds in the Government farm is 186 and 172 eggs respectively.[1] This can convey some idea of the magnitude of unexploited potential in the poultry industry.

3.18 Commercial poultry-rearing as a subsidiary occupation by the farmers has come to be recognized as the quickest and the easiest way of increasing farm incomes and providing employment to the under-employed. In view of these advantages, poultry industry has a special appeal in Kerala. It has been estimated by some experts that through replacement of indigenous birds with the exotic ones, the contribution from this sub-sector to the total State income could be more than doubled. This would be possible in less than five years, provided the pullets of desired types are made available to the farmers in adequate numbers at a low cost. The State should strive to achieve this by opening a large number of poultry extension centres. It is suggested that by the end of 1965-66 there should be at least one poultry extension centre in each Community Development Block. During the Third Plan, 143 additional centres may be opened and all these should work in close association with the block cooperatives. An investment of Rs. 35.75 lakhs would be needed to start the proposed centres.

3.19 Duck-rearing is done only on a small scale in the State in spite of the fact that conditions in most parts of Kerala are very well suited for commercial duck-keeping. Vast inland water resources and the abundant fauna in them is an ideal condition for large scale commercial duck-rearing. There is good demand for duck products particularly in Calcutta and Ceylon but this export potential could be developed only when the fowls are bred in sufficiently large number. It is, therefore, suggested that this potential should be fully exploited and the State should take adequate steps in the matter. In order to make the programme economical, some of the poultry development blocks may include multiplication of suitable duck breeds for distribution. Efforts may be made to select the best from the local birds and rear them for producing pullets for distribution.

Rearing of Goats

3.20 Goat-rearing under stall-fed conditions is customary in Kerala. This is quite contrary to the practice found in other parts of the country, where the goats are let out during the major part of the day for free browsing. Rearing of goats, as it is practised in Kerala, does not lead to dangers such as suppression of vegetation, crop destruction, etc.

3.21 Goats are reared both for milk and meat. The average milk yield per goat is low, 40 lbs. per annum, as against the all-India average of 127 lbs. (Table 16). This is due to poor management and general malnutrition, but could be easily raised to the all-India level with improved feeding and better care. As a matter of fact it is not unusual to find goats yielding as high as 400 to 500 lbs. of milk in urban households and this is due to better management.

[1] *Administration Report of the Animal Husbandry Department*, 1957-58, Government of Kerala, 1959.

Chapter 4

Forests

FORESTS RANK AMONG the key resources of Kerala. Estimates of the area under forests differ widely. According to the Revenue Department figures, the area under forests is 24.58 lakh acres, that is, 26.2 per cent of the total area of Kerala. According to the Forest Department, the area under its jurisdiction is 22.28 lakh acres. Private forests account for another 4.80 lakh acres thus giving a total forest area of 27.08 lakh acres (30 % of the total area). Whichever be the correct figure, it is clear that the proportion of area occupied by forests is much higher in Kerala than the average for the whole of India (17.2%).

4.2 Apart from the importance of forests as a source of raw material for the industry, and timber for other uses, forests have a moderating effect on the climate and act as a vegetal cover protecting the soil from erosion. The position in Kerala is quite satisfactory in respect of the protective function of forests. A large number of perennial tree crops like coconut, arecanut, cashewnut and rubber are also grown in the State. Their effectiveness in protection of the soil and influence on climate is as great as in the case of the forests. These perennial crops, therefore, act as a useful subsidiary to the actual forest growth.

4.3 The quality of forest growth of Kerala is also of a very high order. During 1955-56, forests contributed Rs. 5 crores,[1] that is, 1.4 per cent of the State income, which is almost double the all-India average (0.7%). Per acre yield of forests is also higher in Kerala. Whereas it was Rs. 5.6 per acre on an average for India, it was as high as Rs. 18 per acre in Kerala during 1955-56. Employment potential of forests, however, is quite meagre in relation to the area they occupy. Forests in Kerala employed only 19,000 workers, that is, 0.35 per cent of the total working force (all-India 0.4 %). Forests generally require only a few hands to work as the maintenance staff and as labour for extraction and logging.

Type of Forests and their Regional Distribution

4.4 The high yield and the large variety of important commercial species grown in the State are a consequence of the climatic and topographical features of the State. Kerala gets the benefit of south-west as well as north-east monsoons. As a result of these, the State is well assured of a good rainfall which, in addition, is fairly well

[1]. Appendix 2 explains the method of calculation.

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Artificial Plantations

4.10 As mentioned already, in addition to the natural forests, Kerala also ranks high among the Indian States in respect of artificially raised plantations of valuable species. In fact the teak plantations were first raised in Nilambur as far back as 1842. The planting work had been regularly carried out with the result that there were about 75,000 acres under this species at the end of 1959.

4.11 Although Kerala can claim to have been a pioneer in the matter of teak plantations, a beginning with the other plantations has been made only very recently with the onset of the era of planning in the State. During the First Plan period forestry could be paid little attention. Effective beginning may, therefore, be said to have been made only during the Second Plan. Some of the plantations which have been recently started in the State are:

(i) *Cashewnut plantations*: Covering an area of 1,100 acres.
(ii) *Softwood plantations*: An area of 9,220 acres had been covered by the end of the Second Plan.
(iii) *Wattle plantations*: A beginning for raising this very valuable tanbark tree has been made recently in the Hamilton Plateau of the Devicolam range.
(iv) *Eucalyptus grandis*: Plantations of this species were started in the high ranges in Peermade and Munnar and have been showing very encouraging results. They form the raw materials for making pulp, which is used for manufacturing newsprint and rayon.

It will thus be seen that Kerala has made considerable progress in its plantation programmes and leads the other States, especially in respect of its teak plantations.

Forest Produce—Its Extraction and Utilization

4.12 Total quantity of major forest produce extracted from the forests of Kerala during 1958-59 through Government Agency as well as through purchasers is given below:

MAJOR FOREST PRODUCE EXTRACTED FROM KERALA, 1958-59

	Government Agency (*cu. feet*)	*Purchasers*
Rough logs	3,950,567	5,06,079 c.ft.
Rough poles	410,202	1,088 c.ft.
Sawn and Squared timber	144,802	—
Fuel	22,791	25,376 tons
Miscellaneous	1,626	Rs. 1,224,460 worth

The gross revenue through actual sales amounted to Rs. 2.44 crores and royalties on coupes sold to purchasers earned another Rs. 0.64 crores.

4.13 Extraction and stocking in the depots are undertaken by contractors but the actual disposal is done departmentally by means of auction. Standing coupes are also

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Chapter 5

Fisheries

KERALA IS THE leading fish producing State in India. Its present production of fish amounts to about 310,000 tons. Maharashtra comes next with an output of 210,000 tons. Over 80 per cent (260,000 tons) of the fish landings are obtained from the sea and the rest from inland sources. About 75,000 tons of fish (70,000 tons cured and 5,000 tons fresh) are at present annually exported to other parts of the country, and 2,000 tons (frozen and canned) are sent abroad. Allowing for a very negligible import, the net quantity available for local use comes to 235,000 tons per annum.

5.2 Fish eating is popular in this State. About four-fifths of the population are accustomed to taking fish regularly. At present the per capita consumption of fish in the State is 41.30 lbs. per year for the fish eating population and 33.00 lbs. per year for the total population, as against 9.50 lbs. and 6.10 lbs. respectively for India as a whole.

5.3 About 85,000 persons (1.60 % of total labour force) are directly engaged in fishing activities and they produce a net output of Rs. 5.60 crores (1.60 % of State income). The standard of living of an average fisherman in Kerala is very depressed. The average annual income of a fisherman's household in Kerala, consisting of 6.40 members, is estimated at Rs. 542, or only Rs. 85 per fisherman, that is, about one-third of the average per capita income in the State.

PRESENT STATUS OF FISHERIES

Marine Fisheries

5.4 *Coastal Fisheries*: Although Kerala has a comparatively short coastline (10% of all-India) Kerala ranks first in the production of marine fish (about 30% of all-India Production—Table 25). Large marine fish catch can probably be attributed to the much more intensive fishing effort made in Kerala. In 1957, the ratio of man-hours per mile of coastline came to about five times the average for other States. This heavy fishing pressure is paralleled by the high pressure of population on land, leading to an intensive use of the natural resources. Intensive fishing is not only confined to the number of hours of fishing put in, but it also includes the use of more efficient methods. It will be seen from Table 26 that the catch per man-hour of fishing in Kerala compares favourably with that in the other States.

[Tables 25+26, appearing on p. 288, have not been processed -- Ana]

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the fishing industry, owns a boat-building yard, a workshop, a cold storage and refrigeration plant and runs a training centre. The fishing villages are thus being developed into what may be called Integrated Fishing Centres.

5.11 *Off-shore Fishing*: An attempt to introduce exploratory and commercial off-shore fishing operations from Cochin port was made by the Travancore-Cochin Government as early as in 1940. A Government sponsored private company operated three large-sized (65 feet to 90 feet) vessels for a time. But these operations proved abortive and were given up owing to lack of trained crew and absence of docking and repairing facilities. Thorough exploratory investigations have been on for the last few years, and at present deep-sea fishing is being carried on jointly by the Government of India and the Indo-Norwegian Project.

5.12 *Chank Fisheries*: With the transfer of some areas of Travancore-Cochin to Madras at the time of the reorganization of States, Kerala has lost some of its important chank fishing centres along the Kanyakumari coast, and only a few centres of lesser importance, Thekkay Kollencode, Poovar, Pulinkudi, Poonthura, Shankumugham and Veri are now left with the State. The right of collection of chanks is annually auctioned on royalty basis, preference being given to cooperatives. The number of chanks collected and the money realized by the cooperatives in 1957-58 and 1958-59 were 26,629 chanks (for Rs. 16,361) and 18,355 chanks (for Rs. 9,177.50) respectively.

Inland Fisheries

5.13 Estuaries, backwaters and adjacent low-lying fields, rivers and canals, ponds, tanks and reservoirs comprise the inland fisheries of Kerala. According to the State Fisheries Department, the total production from these sources is at present about 50,000 tons per annum. This represents only 20 per cent of the total fish production in the State. The inland fish production of Kerala, though much lower than that of West Bengal (12,000 tons), compares favourably with that of Madras (40,000 tons).

Estuaries and Backwater Fisheries

5.14 The more important rivers opening directly into the sea and having permanent link with it are the Periyar, Bharatpuzha, Beypore, Billiapatam and Korapuzha. Regular fishing in the estuaries is done only during the south-west monsoon period (end of May to beginning of August) when fishing activities in the sea, owing to rough weather, are almost at a standstill. The estuarine catches include such varieties as Mullets, Milk Fish, Prawns of different types and Horse Mackerel.

5.15 The backwaters of Kerala covering approximately an area of about 300 square miles, are the most important source of inland fish production. The main areas are Ashtamudy, the Kayamkulam and the Vembanad, all situated in the Southern part of the State. The production from estuaries and backwaters is estimated by the State Fisheries Department at about 46,000 tons per annum. Prawns constitute the bulk of the catch which comprises, in addition to Prawns, Mullets, Bekti, Horse Mackerel and Engraulis.

Chapter 6

Minerals

FROM THE POINT of view of its industrial development, Kerala's mineral resources are a weak link in the State's economy. With a share of only 1.7 per cent in the all-India production of the minerals, Kerala lags behind most other States in the output of minerals. During 1955-56, the net value contributed by the minerals (Rs. 1.95 crores) was 0.6 per cent of the State income against one per cent of country's income.

6.2 The important minerals of the State are beach sands comprising ilmenite, monazite, rutile, sillimanite, zircon, china-clay and tile-clay. Among these ilmenite and china-clay are the most prominent. The reserves of these minerals are adequate to last more than 20 years and may, therefore, be classified as "minerals with adequate reserves". Graphite, iron ore and mica are also found, though only in very small quantities. The deposits of limeshells occur in lakes and along the coast, but are rather modest in content. The metallic minerals and fossil fuels, however, are almost completely absent. It is the deficiency of these minerals which presents an obstacle to the growth of large scale industries.

6.3 Apart from beach sand collection and limeshell winning from the lakes and estuaries, there are eleven workings, all open cast. These do not include tile-clay working about which no data is available. The number of persons engaged in all these 11 mining enterprises (inclusive of beneficiation) is roughly 6,900. However, according to 1951 Census, the number of persons employed in mining as well as in stone-quarrying is about 18,000, i.e., 0.3 per cent of total working force (all-India 0.4%).

6.4 Table 28 gives the output of minerals from the various workings and their value. In 1955, the value of minerals production was Rs. 1.35 crores. Next year, the value of production went upto Rs. 1.95 crores, representing an increase of approximately 37 per cent. This steep rise was mainly due to the increase in ilmenite production, which went upto 314,348 tons in 1956 from 231,585 tons in 1955. Production registered a further increase of about Rs. 20 lakhs during the next year, (that is, 1957), reaching a level of Rs. 2.1 crores. This was maintained during the next two years, that is, 1958 and 1959. In 1960, however, there was a setback as one of the mineral sand companies had since closed down; and it is likely that the value of the output might not have exceeded Rs. 1.3 crores.

[Text continues on p. 92]

[Table 28 appearing on p. 289 of the text, has not been processed -- Analyst]

11: India G-4,5 (1960-1961) 1962 AWll Kerala AWll

embark and disembark every month at the two airports of the State in Trivandrum and Cochin.

8.3 The State's transport system has to meet not only the requirements of the internal movement of traffic and the needs of inter-State and overseas trade and commerce of the State, but also the traffic connected with the import and export trade of adjoining areas in the neighbouring States. Calicut and Cochin provide suitable inlets and outlets for the intake of oil fuels, cotton, hardware and machinery, fertilizers and foodgrains, and for exports of tea, coffee, etc.

The Transport System

8.4 The transport system of the State consists of:

A. Sections of the Southern Railway, 543 miles long; (broad gauge 331 miles; metre gauge 204 miles; mixed gauge 8 miles), serving port-towns such as Cochin, Quilon and Calicut, and other important industrial centres.

B. A road network made up of national and provincial highways (1,432 miles) and district and village roads (9,307 miles).

C. A unique inland waterway system of navigable rivers and coastal and cross canals, 1,178 miles long.

D. Thirteen ports, including a major port at Cochin, and two active minor ports at Calicut and Alleppey.

E. One hundred and eleven statute miles of airways, with airports at Trivandrum and Cochin.

8.5 Nearly 145,000 persons,[1] constituting 2.93 per cent of the working force of the State are engaged in transportation and account for an annual income of Rs. 8.697 crores.

8.6 The features of this system, particularly in relation to the physical and financial (investment) demands that the growth of the State's economy may make on it in the coming decade (1961–71) are highlighted here for each medium of transport.

THE RAILWAYS

8.7 In relation to the extent of area served (14,992 sq. miles), the railway mileage per 100 square miles of State territory (3.6 miles) compares favourably with all-India (2.7 miles) and Mysore (2.2 miles); Madras State is better served with 4.4 miles per 100 square miles. The railway mileage per 100,000 of population in the State is however, only 3.4 miles, slightly less than a third of what it is for all-India, viz., 9.5 miles. The corresponding figures for the adjoining States of Mysore and Madras are higher being 6.2 and 5.6 miles respectively. The comparatively lower average

[Text continues on p. 127]

[1] 1951 Census figures.

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

161
162
634

TABLE 2

DENSITY OF POPULATION IN KERALA

District	*Population*	*Density per sq. mile*
Trivandrum	1,738,085	2,052
Quilon	1,929,845	994
Alleppey	1,809,530	2,545
Kottayam	1,730,436	745
Ernakulam	1,858,440	1,468
Trichur	1,634,251	1,422
Palghat	1,775,477	896
Kozhikode	2,619,285	1,283
Cannanore	1,779,852	649
KERALA	*16,875,199*	*1,185*

SOURCE: 1961 Census Provisional Population figures.

TABLE 3

ESTIMATE OF STATE INCOME OF KERALA (1956-57)
(At current prices)

● 434
433
171

	Kerala		*India*	
	Rs. crores	*Per cent*	*Rs. crores*	*Per cent*
A. Primary Incomes	*172.5*	*49.1*	*4,320.0*	*45.4*
1. Agriculture	151.3	43.1	4,300.0	
2. Animal Husbandry	10.7	3.0		44.9
3. Forestry	5.0	1.4	70.0	
4. Fisheries	5.5	1.6	60.0	0.5
B. Secondary Incomes	*52.3*	*14.8*	*1,150.0*	*12.1*
1. Factory enterprises	18.0	4.8	780.0	7.8
2. Non-factory enterprises	32.3	9.6	970.0	9.7
3. Mining	2.0	0.6	100.0	1.0
C. Tertiary Incomes	*126.8*	*36.1*	*3,810.0*	*38.5*
1. Communications	3.5			
2. Railways	55.9			
3. Other Transport and Commerce	3.5			
4. Organized Banks and Insurance	31.3			
5. Professions, Arts and Domestic Services	14.6			
6. Public Authorities	18.0			
7. House Property				
TOTAL	*351.6*	*100*	*9,980*	*100*
Population (millions)	15.01		383.0	
Per Capita Income	234.4		261.0	

[Pp. 216-269 have not been processed]

31: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

smiths, masons, etc., four annas a day. But a skilful artisan earns 6 annas a day. But these people do not generally work at the customer's house, but they are given orders for the things and when they bring them are paid the price. Sometimes they are given the metal and the wages for each particular kind of work.

The making of ornaments is one of the weaknesses of Indians and consequently goldsmiths are in no difficulty to get work. In Malabar in former days costly ornaments were confined to Brahmans, but nowadays all classes are imitating the Brahmans in that respect. It is to be deplored. The number of goldsmith families has steadily increased from two to seven within ten years. They are always given the metal and given the wages for the particular kind of work, ranging from Re. 1 to Rs. 30 for the most complicated work which may employ one man for a whole month. A ring may cost Rs. 2 in wage. The same is the case of coppersmith. The wages depend upon the art and the size of the vessel. A big vessel may fetch him Rs. 20.

In kind.—The chief labour of the agricultural classes for which wages are paid in kind is the climbing of coconut trees and felling the fruit, and the sowing of paddy. One coconut is given if a man climbs four trees. An ordinary man can climb forty trees a day and he can earn ten coconuts, which according to the present price may bring him 8 annas. This has been the custom for a long time and this rate of wage has shown no sign of improvement since the labourers themselves do not demand more; because the price of coconuts has steadily increased and with that rise their wages also must rise.

The sowing of paddy is generally done by women who receive as wage one-tenth of the quantity of paddy sown.

It may be remarked here that throughout the whole of Malabar the Pariyas and other untouchables such as Cherumas, Nayadis, etc., are always paid 2 Edangalis of paddy for men (1½ Edangalis for women) whatever kind of work they do, per day. This has been their wage from time immemorial.

Current prices of staples.—A bag of rice containing 8 paras * costs Rs. 12-4-0, if of inferior sort, Rs. 10. Fish 1 pie † for five small fishes, salt 2 annas for 1 Madras measure.

It may be noticed here that the Muhammadan and Christian labour costs more than the Hindu labour, since those two classes can perform a greater quantity of work because of their superior physical strength.

Savings and debts.—The number of families which have made savings may be estimated as between 75 and 100, of whom ten to fifteen may be Muhammadans, fifteen to twenty of lower castes, and the remainder of higher castes. But the persons who have lost their money are very numerous, probably between 200 and 300. Some lost through trade, many through litigation. But the primary cause of loss of property is the peculiar tenure of land as explained above. Perhaps all or nearly all the savings of the higher classes are used as loans to neighbours. The amount may be estimated at Rs. 50,000.

About Rs. 2,000 a year is spent on jewellery.

The estimated income from land and from other sources for this village is Rs. 2,50,000 a year for a population of 7,596, out of

* [180 lb.—Ed.]

† [12 pies = 1 anna = 1 *d.*—Ed.]

: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

which Rs. 6,411-7-0 goes as land revenue and another Rs. 3,500 as income-tax to the Government, leaving Rs. 2,40,000 for the village. There are 385 landowners and these people get Rs. 90,000 a year for their land. The amounts earned by the great merchants may be estimated at Rs. 25,000, and this amount is shared by nearly 500 families. This amount largely comes from parts outside the village and by exportation of coconuts. The profits these people get from the village itself are not calculated under this heading since it forms no income to the village. But that may be estimated at Rs. 5,000 only. Thus all that remains to the agricultural classes after deducting the incomes of the landowners and traders, is about Rs. 1,25,000 which must be shared by 805 families of 6,000 people, an average of Rs. 20-13-9 per head per annum. The total earning of an agricultural family on an average comes to nearly Rs. 146 a year or Rs. 12-2-8 a month or As. 6-6 a day. Taking a rough estimate of what a family has to spend according to the present standard of living, which is in itself a low one, we may estimate the expense of a family to be at 10 annas a day. From personal experience I have found that the cost of giving artisans working in the house the one meal a day which is customary, is 2 annas per man, we made no difference between their meal and ours. Something, but not much, can be saved on this in quality, and, making all allowances for children, I infer that a family of seven members will have to spend at least 10 annas a day for food or Rs. 228 a year. Making an allowance of Rs. 20 for clothes and for religious and social functions—it is only a small amount for a year—they will have to spend Rs. 248 a year for food, in order to maintain their body and soul without suffering, leaving out of consideration luxuries, pleasure, etc. What do they get now? Only Rs. 146. So what they get is sufficient only for one meal. I was told by the carpenters and blacksmiths who worked in my house that they could not provide themselves with meals during the nights and what they do is only to drink rice water, and even that very rarely. They manage with the meal given from the house and what they get as wage is spent on their wives and children with a small saving for contingencies. This economic suffering is the main cause for the physical deterioration in India, and this is the cause of infant mortality, and this accounts for much of ignorance and filthy and unsanitary habits, since with every one first food, then other matters. The case of agricultural people is much worse than artisans; they are paid lower and they are rarely given the one meal in addition as are the artisan class. Ordinary labourers if they do not get work have to starve literally.

It is evident from the previous statement of facts that no money can be saved at the present time by the tenants for agricultural capital, or for manure. Further there is no organized industry of any kind. The oil-pressing and rope-making industries, which are the most important, are carried on with primitive tools which require no capital. It has been already stated that the landowners get Rs. 90,000 a year, of which they spend for their maintenance a sum of nearly Rs. 40,000. The remaining Rs. 50,000 are spent on loans to neighbours, jewellery, house-building, education of their children, charity, religious and social festivities such as marriage. Loans to neighbours take away more than half, education nearly Rs. 10,000, and the rest for the other expenses. Money-lending